PTO-1449 Substitute

## U.S. Department of Commerce Patent and Trademark Office

## INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)

Application Number	10/551,162					
Filing Date	March 29, 2004					
First Named Inventor	Stan Gronthos et al.					
Art Unit	1644					
Examiner Name	Michail A. Belyavskyi					
Attorney Docket No.	75190/JPW/BJA					

xaminer	Cite	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document
Initials	No.	Number-Kind Code <sup>2 (if known)</sup>	MM-DD-YYYY	Name of Patence of Applicant of Cited Document
	1	5,197,985	03-30-1993	Caplan et al.
	2	5,226,914	07-13-1993	Caplan et al.
	3	5,486,359	01-23-1996	Caplan et al.
	4	5,591,625	01-07-1997	Gerson et al.
	5	5,811,094	09-22-1998	Caplan et al.
	6	5,827,740	10-27-1998	Pittenger
	7	5,837,539	11-17-1998	Caplan et al.
	8	5,922,597	07-13-1999	Verfaille et al.
	9	5,980,887	11-09-1999	Isner et al.
	10	6,022,540	02-08-2000	Bruder et al.
	11	6,087,113	07-11-2000	Caplan et al.
	12	6,261,549	07-17-2001	Fernandez et al.
	13	6,322,784	11-27-2001	Pittenger et al.
	14	6,335,195	01-01-2002	Rodgers et al.
	15	6,387,367	05-14-2002	Davis-Sproul et al.
	16	6,387,369	05-14-2002	Pittenger et al.
	17	6,645,727	11-11-2003	Thomas et al.
	18	6,709,864	03-23-2004	Pittinger et al.
	19	6,875,430	04-05-2005	McIntosh et al.
	20	7,122,178	10-17-2006	Simmons et al.
	21	5,405,722	01-11-1995	Ponting et al.
	22	2004-0107453	06-03-2004	
	23	2006-0008452	01-12-2006	
	24	2005-0019911	01-27-2005	
	25	2005-0158289	07-21-2005	
	26	2005-0281790	12-22-2005	
	27	2002-0085996	07-2002	
	28	2006-0286077 A1	12-21-2006	

EXAMINER
SIGNATURE DATE CONSIDERED

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds of Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English Language Translation is attached.

Applicants: Stan Gronthos et al.

Serial No.: 10/551,162

ALL REFERENCES CONSIDERED EXCEPT WHERE AND POPULATION OF M.B./

	TO-1	449 Substitute	U.S. Dep	partmen	t of Com	merce	Application Number	10/551,1	
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Exam <mark>iner</mark> Initia <b>ls</b> *	Cite No.1	Document Nur Number-Kind Cod		tion Date D-YYYY	Nan	ne of Patentee or Applica	nt of Cited Docun	nent	
	29	2006-01938			-2006				
	121	11/663,5	570	03-23	-2007				
	122	11/663,5	63	03-23	-2007				
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	30	WO 01/	011011	_	02-15	-2001			
	31	WO 04/8	4921 A	1	10-07	-2004			
	32	WO 04/8	5630 A	1	10-07	-2004			
	33	WO 99/0	03973	Α.	01-28	-1999			
	l								
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\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds of Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English Language Translation is attached.

Form P7	ro-1	449 Substitute	U.S. Department of Cor	nmerce	Application Number	10/551,162	
			Patent and Trademark	Office	Filing Date	March 29, 2	
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			NON PATENT LITERATI	JRE DOCUM	MENTS		
Examiner Initials	Cite No.1		author (in CAPITAL LETTERS nal, serial, symposium, catalog, e and/or country	tc.) date, page	(s), volume-issue numb		T <sup>2</sup>
		C. (1999) Ro vascular smo	Kalén M, Lindahl le of PDGF-B and oth muscle cells of formation in the	P, Abra PDGFR- $eta$ and peri	msson A, and in recruitme cytes during	nt of embryonic	
	35	Searching Au	l Search Report is thority (ISA/AU) of tional Application	on May 1	7, 2004 in c	onnection	
	26	the Internat	l Preliminary Repo ional Bureau of W ith International 00417	IPO on C	ctober 1, 20	issued by 05 in	
	37	Alberico et	al. (1987) Blood	69, page	1120-1127		
	38		(1981) "Haemopoio tructural aspects				
	39	Allen et al. Immunol. Ser	(1990) "Marrow B . 49, pages 1-38	iology a	nd Stem Cell	s"	:
	40	Anklesaria e	t al. (1989) Blood	d 74, pa	ge 1144-1151		
	41	Anklesaria e page 7681-76	t al. (1987) Proc 85	. Nat'l	Acad. Sci. U	SA 84,	
	42	Bennett, J.H	. et al. (1991) J	. Cell S	ci. 99, page	131-139	
	43	Bentley, S.A	. (1982) Br. J. Ha	aematol	50(1), pages	1-6	
EXAMINER SIGNATURE			DATE CONSI	DERED			

						1490 4 01	
Form P	ГО-1	449 Substitute	U.S. Departm	ent of Commerce	Application Number	10/551,162	
			Patent and T	rademark Office	Filing Date	March 29, 2004	
		TION DISCLOSU		ENT	First Named Inventor	Stan Gront et al.	hos
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Examiner Initials	Cite No.1	Include name of the (book, magazine, jour	rnal, serial, symposi	AL LETTERS), title of the ium, catalog, etc.) date, pag nd/or country where publi	ge(s), volume-issue numbe	e), title of the item r(s), publisher, city	T <sup>2</sup>
	44		Fibroblast	. (1980) "Char Colony-Formin es 289-301			
	45		of Prolife	. (1981) "Huma ration of Bone 7			
	46	Clarke, Emer review), 200	% "Mesench	ymal Cells" ww	w.stemcell.com	m (mini-	
	47		on of Haemo	Conditions Con poietic Stem C -344		′ J. Cell	
	48	Dexter et al	. (1984) K	roc Found. Ser	. 18, pages 5	7-96	
	49	Doherty, M.J. et al. (1998) "Vascular Pericytes Express Osteogenic Potential In Vitro and In Vitro" J. Bone and Mineral Research 13, pages 828-838					
	50	Fong et al. Procedure fo BioTechnique	r Telomeri	nradioactive, c Repeat Ampli s 1029-1032	Agarose Minigo	el ocol"	
	51	Friedenstein	ı (1976) In	t'l R. Cytolog	y 47, page 32'	7	
	E 2	Cloning in V	itro and R	tromal Mechani etransplantati antation, page	on in Vivo" In	mmunology	
	53	Colonies in	Monolayer	970) "The Deve Cultures of Gu Tissue Kineti	inea-Pig Bone	Marrow	
EXAMINER SIGNATUR				DATE CONSIDERED			

Form P	TO-1	449 Substitute	U.S. Departm	ent of Commerce	Application Number	10/551,162	
			•	ademark Office	Filing Date	March 29, 2	2004
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Examiner Initials	Cite No.1	include name of the (book, magazine, jour	nal, serial, symposi	L LETTERS), title of the a um, catalog, etc.) date, pag nd/or country where publis	e(s), volume-issue numb	e), title of the item er(s), publisher, city	T <sup>2</sup>
	Friedenstein et al. (1992) Bone and Mineral 18, pages 199- 213						
	55		arrow Cont	1994) "The STRO ains the Osteog 173			
	56	Gronthos, S.	, et al. (	1995) Blood 85	, pages 929-9	40	
	57	Huang and Te	rstappen (	1992) Nature 36	60, pages 745	-749	
	58	Keating et a	1. (1982) 1	Nature 298, pag	ges 280-283		
	59	Kim et al. (	1994) Scie	nce 266, pages	2011-2015		
	60	Knospe et al	. (1966) B	lood 28, pages	398-415		
	61	Knospe et al	. (1972) B	lood 39, pages	331-340		
	62	Lichtman (19	81) Experi	mental Hematolo	ogy 9, pages	391-410	
	63	Long (1992)	Experiment	al Hematology 2	20, pages 288	-301	
	64	McManus and	Weiss (1984	1) Blood 64, pa	ages 1036-104	1	
	65	McIntyre and 839	Bjornson	(1986) Exp. Her	matol. 14, pa	ges 833-	
	66	Miltenyi et a	al. (1990)	Cytometry 11,	pages 231-23	8	
	67	Owen (1985) 1	Bone and M	ineral Research	n 3, pages 1-	25	
EXAMINER SIGNATURI				DATE CONSIDERED			

Form D'	r <u>o</u> 1	1449 Substitute	II & Donartment of Co	mmores	Application Number	10/551 162		
rorm r l	. <b>∪</b> -1	1447 Substitute	U.S. Department of Co Patent and Trademark			March 29, 2	004	
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		<b>,</b>	NON PATENT LITERAT	URE DOCUM	MENTS		T <sup>2</sup>	
Examiner Initials								
	68	Owen and Friedenstein (1988) CIBA Found. Symposium 136, pages 42-60						
	69	Perkins and	Fleischman (1990)	Blood 7	5, pages 620	-625		
	70	Piersma et a	l. (1983) Br. J.	Haematol	. 54, pages	285-290		
	71	Rothstein et	al. (1985) Blood	65, pag	e 744			
		Simmons and ( 408 (abstract	Gronthos (1991) I	nt'l J.	Cell Cloning	9, page		
	73	and Functiona in Hemopoies: Processing: I	., et al. (1994) al Activity of Hu is" Advances in B Progress in Clini Symposium 389, p	man Marr one Marr cal and	ow Stromal P ow Purging a Biological R	rogenitors nd		
	74	Simmons et al	L. (1987) Nature	328, pag	es 429-432			
	75	Simmons and T	Torok-Storb (1991	) Blood	78, pages 55	-62		
	76	Simmons and T	Corok-Storb (1991	) Blood	78, pages 28	48-2853		
	77	Tavassoli and pages 195-203	l Friedenstein (1	983) Ann	. J. Hematol	. 15,		
	78	Tavassoli and	l Crosby (1968) S	cience 1	61, pages 54	-56		
	79	Cytotoxic Tre Hematopoiesis	(1988) "Long-Termetatment: Stem Cells: Long-Term Effectmatol. Published	ls and Ma cts of Cl	icroenvironmented	ent in and		
EXAMINER SIGNATURE	<u> </u>		DATE CONSI	DERED				

Form P	<u> </u>	449 Substitute	U.S. Departn	ent of Commerce	Application Number	10/551,162	
			-		Filing Date	March 29, 3	2004
INFOR	Patent and Trademark Office NFORMATION DISCLOSURE STATEMENT Use several sheets if necessary)    NON PATENT LITERATURE DOCUMENTS				Stan Grontlet al.	hos	
(Use several sheets if necessary)  Art Unit 1644  Examiner Name Michail A. Belyavskyi Attorney Docket No. 75190/JFW/BJ/  NON PATENT LITERATURE DOCUMENTS  Examiner No. Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.  80 Van Vlasselaer et al. (1994) Blood 84, page 753-763  81 Waller et al. (1995) Blood 85, page 2422-2435  82 Weiss (1976) Anatomical Record 186, page 161-184  Zóltowska A, Stepiński J, Lewko B, Zamorska B, Roszkiewicz A, Serkies K, and Kruszewski WJ. (2001) Malformations of Angiogenesis in the Low Differentiated Human Carcinomas. Immunohistochemical Study. Arch. Immunol. Ther. Ex. 49: 59-61  Axelrad et al., New Technologies for the Enhancement of Skeletal Repair, Injury, Int. J. Care Injured (2007)							
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	80	Van Vlasselae				63	
	81	Waller et al	. (1995) B	lood 85, page	2422-2435		
	82	Weiss (1976)	Anatomica	l Record 186, p	page 161-184		
		A, Serkies K, Angiogenesis Immunohistoch	, and Krus in the Lo	zewski WJ. (200 w Differentiate	01) Malformat ed Human Carc	ions of inomas.	
	84	Skeletal Repa					
	85	Bone Repair,	and Skele	tal Regeneratio			
	86	Cell Porous ( Effect of Fib Rate of Osteo	Ceramic Co pronectin	mposites Transp and Laminin on	planted Subcu Cell Retenti	taneously:	
	87		normal in	0) "Mesenchymal dividuals," Art			
	88	Chemokine Rec Stem Cells to	ceptors Me the Impa	teractions of C diate the Migra ired Site in th ry," Stem Cells	ation of Mesen ne Brain Afte:	nchymal r	
	89	express a res	stricted so bable of p	"Bone marrow meet of functionaromoting migrate: 419-427	ally active cl	hemokine	
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	90	Wynn, et al., (2004) "A small proportion of mesenchymal stem cells strongly expresses functionally active CXCR4 receptor capable of promoting migration to bone marrow," Blood, 104(9): 2643-2645						
	91	promotes the	growth, su	005) "Stromal-ourvival, and democals," Bloc	evelopment of	human		
	92	Expression O On Discrete	f The STRO- Development	(1999) "Differe 1 And Alkaline al Stages In l mal of Bone ar	e Phosphatase Primary Cultu	Antigens re Of		
	93	Cells Expres	sing STRO-1 al Cells,"	.999) "Further In Cultures ( Journal of Bor .356	Of Adult Huma	n Bone		
	0.4	Searching Au	thority (IS ith Interna	eport issued by SA/AU) on Augus ational Applica	st 22, 2005 i	tional n		
	95	Searching Au	thority (IS ith Interna	eport issued by SA/AU) on Nover ational Applica	mber 25, 2005	tional in		
	96	Office Action	n issued Ja No. 10/030,	nuary 12, 2009 411	5 in connecti	on with		
		Office Action Serial No. 1		ne 28, 2005 in	n connection	with U.S.		
		Final Office with U.S. Se		sued January 9, 0/030,411	, 2006 in con	nection		
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Form P	ГО-1	449 Substitute	U.S. Departm	ent of Commerce	Application Number	10/551,162	!	
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	99	Office Actic Serial No. 1	on issued Ap .0/955,709	oril 20, 2007	in connection	with U.S.		
	100	Office Actic 11/178,920	on issued A	igust 24, 2007	in connection	n with		
	101	Office Actic 110/955,709	on issued A	igust 25, 2006	in connection	n with		
	102	Examiner Int connection w	erview Summ	mary issued Justine Private No. 10/0	ne 27, 2006 in 30,411	n		
	103	Office Actic U.S. Serial	on issued Au No. 11/178	igust 24, 2007 ,920	in connection	n with		
	104	Office Actic U.S. Serial	on issued De No. 11/178	ecember 15, 20 ,920	06 in connect:	ion with		
	105	Office Actic Serial No. 1	on issued Ju 1/178,920	ıly 10, 2006 i	n connection	with U.S.		
	106	Office Actic U.S. Serial	on issued Ja No. 11/169	anuary 22, 200 ,875	7 in connection	on with		
	107	Office Actic Serial No. 1	on issued Ju .0/813,747	ıly 10, 2006 i	n connection	with U.S.		
	108	Office Actic U.S. Serial	n issued De No. 10/813	ecember 15, 20	06 in connect	ion with		
	109	Office Actic Serial No. 1	n issued Ap 0/813,747	oril 3, 2007 i	n connection	with U.S.		
	110	Office Actio U.S. Serial	n issued Oo No. 10/813	ctober 19, 200 747	7 in connection	on with		
	111	Restriction connection w	Requirement	issued Janua erial No. 11/3	ry 8, 2008 in 26,736			
EXAMINER SIGNATURI				DATE CONSIDERED				

Form PTO-1449 Substitute		U.S. Departm	ent of Commerce	Application Number	10/551,162			
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			NON PATENT	LITERATURE DOCU	JMENTS			
		o. (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city						
	112	Final Office with U.S. Se	e Action is	sued January 1 0/955,709	0, 2008 in co	nnection		
	113	Extended Eur connection v	ropean Sear with Europe	ch Report issu an Application	led December 2' No. 05787106	7, 2007 in .3		
	114	Supplementarin connection	ry European on with Euro	Search Report opean Applicat	issued Januar ion No. 057540	ry 2, 2008 008.0	:	
	115	Cochlovius, Modern Drug	B. et al. Discovery	(2003) "Therap pp 33-34, 37-3	eutic Antibod: 8	ies,"		
	116	Gronthos et (Abstract)	al. Journa	l of Hematothe	rapy, 1996. 5	, 15-23		
	117	Hansson, M. - Patentable	et al. (200 e as Cultura	07) "Commentar al Artifacts?"	y: Isolated St V.25, pp. 150	tem Cells 07-1510		
	118	bisphosphona	ate, zaledro	onic acid, inc	reases minera	lisation		
		Marrow Meser PDGF-BB as <i>A</i>	nchymal Prog Assayed In Y	genitor Cells	Exposed to TGI tro" Journal	F- ß1 or		
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